

Municipal Planning Strategy for the
COUNTY OF INVERNESS

Concerning the Regulation of Wind Turbine Development

January 2012

Inverness County Municipal Planning Strategy- Wind Turbine Development

Table of Contents

1. INTRODUCTION	3
1.1 Background.....	3
1.2 Legislative Mandate.....	4
1.3 Municipal Profile.....	4
2. REGULATING WIND TURBINE DEVELOPMENT	6
2.1 General Resource Designation	6
2.2 Domestic Scale Turbines	6
2.3 Utility Scale Wind Turbines	7
2.4 Parks and Protected Areas	8
2.5 Expansion of Wind Development	9
2.6 Documentation Requirements for All Turbines.....	9
2.7 Removal of Turbine.....	10
3. IMPLEMENTATION.....	11
3.1 General.....	11
3.3 Amending the Municipal Planning Strategy.....	11
3.4 Amending the Land Use By-law.....	12
3.5 Plan Review	12

1. INTRODUCTION

1.1 Background

With the political, economic and ecological pressure to lessen dependence on fossil fuels for energy supply, communities throughout Atlantic Canada are looking at alternative sources of energy. Wind energy is becoming an important and increasingly viable source of energy. The Government of Nova Scotia's Renewable Electricity Plan and regulations require that by 2015, 25% of the province's electricity will come from renewable sources, including wind, biomass, tidal and solar power. In recent years, a number of wind turbine projects have been constructed throughout Nova Scotia, with several more under consideration currently. These facilities range from single turbines to "wind farms", consisting of many turbines clustered together. According to the Canadian Wind Energy Association, wind energy powered the equivalent of 563,000 Canadian homes as of 2007, a number that will certainly increase in coming years. Along with construction of the turbines, some concerns have emerged, especially regarding visual and sound impacts on nearby residences.

As turbines of different sizes have been built throughout the province, many municipalities have created land use policies to plan for the development of this infrastructure. The County of Inverness has identified the need for a land use planning mechanism to regulate such development. This strategy and accompanying land use by-law have been developed recognizing the benefits that wind turbines bring to the community, while protecting the interests of local residents and respecting the surrounding environment. Council feels that residents are generally supportive of renewable energy development, as long as the character, health and safety of their communities are maintained.

There are two scales of wind turbine development. The larger turbines are often called 'utility scale' wind turbines, and they are designed to supply power commercially for Nova Scotia Power Inc. (NSPI). These turbines can reach 115 metres (377 feet) in height and are typically developed by companies (often community based) that have agreements in place with NSPI for the sale of the electricity. Usually, only one turbine is initially constructed to be used as a test turbine. If tests confirm good wind energy generation capabilities for a site, more can be constructed, leading to a development known as a wind farm. However, many turbine developments are stand-alone operations where there is only one turbine at a location. Even a small increase in wind velocity has a great impact on energy produced, so location and design are very important. The largest wind farm in Nova Scotia is currently the Glen Dhu Wind Farm in Pictou and Antigonish Counties, producing 62.1 megawatts of electricity (the output of one megawatt of wind power is enough electricity to power approximately 350 homes). The Province requires that wind turbines producing 2 megawatts or more undertake an environmental assessment. Federal requirements may also apply.

Smaller scale turbines, or 'domestic' turbines, are also being installed throughout the province. As the term implies, these turbines generate power primarily for private use by homes, farms and businesses. Many of these turbines are installed "behind the meter" and can substantially reduce or entirely replace power consumption from the grid. In addition, some domestic wind turbines have been constructed in remote areas not serviced by NSPI. Nova Scotia Power's Net Metering program also allows domestic turbines, generating 100 kilowatts or less, to be interconnected with the main utility and only draw from the provincial power grid when needed. Surplus energy generated by the turbine gets delivered to the provincial grid and the customer can credit that energy against any future use.

The size of the turbines refers to their nameplate capacity, which equals the electricity produced when the wind velocity results in the greatest conversion efficiency. The smallest domestic turbines can be purchased at retail stores, generating anywhere from 50 to over 500 watts.

Inverness County Municipal Planning Strategy- Wind Turbine Development

Inverness County is supportive of wind energy and believes that it is important that this source of energy be developed without jeopardizing the rights of their residents to fully enjoy their property and way of life. Council intends to provide for the future development of wind turbines and to regulate them in such a way that other uses, especially residential development, will not be adversely affected. Council is aware that there will be no perfect solution acceptable to all residents and the developers of wind energy, but will strive to arrive at a reasonable balance in their approach to control future wind turbine development.

1.2 Legislative Mandate

The *Municipal Government Act*, Chapter 18 of the Statutes of Nova Scotia, 1998, as amended, gives municipalities the authority to regulate land use and development within its borders. This authority is exercised through the adoption of a Municipal Planning Strategy and Land Use By-law.

The purpose of a Municipal Planning Strategy is to provide statements of policy to guide the development and management of all or part of a municipality. Council may address a broad range of land uses in the strategy, or may choose to provide for the planning and management of only one use of land. In the preparation of the Municipal Planning Strategy, the Statements of Provincial Interest were reviewed to determine their applicability to this planning initiative. Statements of Provincial Interest form part of the *Municipal Government Act*, and the Act requires that planning documents must be consistent with them.

Council has decided that this Municipal Planning Strategy and Land Use By-law will address only the development of wind turbines within the entire County of Inverness. As such, these documents will not adversely affect the goals and objectives reflected in the Statements of Provincial Interest. Prior to the adoption of this Planning Strategy, land use planning existed in most of the County and was regulated by five separate Plan Area Municipal Planning Strategies. These existing planning documents will not be affected, other than through a change in their status from Municipal Planning Strategies to Secondary Planning Strategies, and they will be subject to the requirements of this strategy.

This strategy provides the policy statements with respect to the regulation of wind turbines, with regulations pertaining to wind turbine development contained in a separate document, the Land Use By-law. The documents are prepared and adopted concurrently and in accordance with Section 205 of the *Municipal Government Act*, where they were subject to a public participation program within the County. After adoption, both documents may be amended, but any amendments must be consistent with the intent of the Municipal Planning Strategy. Development is regulated by the Land Use By-law through the issuance of a development permit by the Municipal Development Officer. A Development Officer may not issue a development permit unless it meets all requirements of the Land Use By-law.

1.3 Municipal Profile

The Municipality of the County of Inverness is a largely rural municipality located in the north-eastern part of Nova Scotia, covering 3,830 square kilometers of land. The County is bounded by the Canso Strait to the west, Victoria County to the south, and the Northumberland Strait to the north. According to the 2006 Census, the population of the County was roughly 19,036. Larger settlements in the County of Inverness include Inverness, Chéticamp, Port Hood and Port Hastings.

Traditionally, the main industries in the County were fishing along the coast, farming and coal mining. Today, tourism is an important local industry, with the Ceilidh and Cabot Trails, as well as Cape Breton Highlands National Park, all being located partially within the boundaries of the County. Geographically, the County is dominated by lowlands along the coast, with a significant number of harbours and

Inverness County Municipal Planning Strategy- Wind Turbine Development

beaches, and highlands inland throughout the county, particularly as one moves north. The Nova Scotia Wind Atlas, prepared by the Province, indicates that the highland and coastal areas present wind conditions most favourable to wind turbine development.

The County is governed by a Council of 6 members and provides a wide range of municipal services. Planning and development services for the County are the responsibility of the Eastern District Planning Commission. Current land use planning has been established as needed in different sections of the County at various times. At the time of the development of this strategy, the Chéticamp, Inverness, Port Hastings, Port Hood and Whycomomagh municipal plans regulate development for the planned areas of the County.

2. REGULATING WIND TURBINE DEVELOPMENT

2.1 General Resource Designation

This Municipal Planning Strategy and Land Use By-law will cover the entire Municipality of the County of Inverness. While municipal planning documents often regulate many uses, Inverness County Council has decided that this Strategy and By-law will only regulate wind turbine developments. In keeping with this objective, Council intends to establish a “General Resource” designation that will apply to the entire Planning Area. This designation provides the framework by which wind turbine developments will be regulated within the County; both small turbines, (“domestic scale”), which are defined as generating under 100 kilowatts (kW), and large turbines (“utility scale”), which are defined as generating over 100 kW. In the future, as Council sees fit, this Plan can be expanded to address other County-wide issues, either within the General Resource designation or a new designation.

Currently, there are five planning areas in place within the County of Inverness: Chéticamp, Inverness, Port Hood, Port Hastings and Whycomagh. These were each established at different times, usually in response to a specific planning need, and each Planning Area has its own Municipal Planning Strategy and Zoning By-law. These existing plans will continue to remain in effect; however, they will now be considered Secondary Planning Strategies addressing local concerns. The the wind turbine regulations will be in effect for the entire County, and overlay all currently zoned and un-zoned areas of the County. The wind turbine regulations will serve as a high-level general guideline, with more detailed, and possible more restrictive, regulations being found in the secondary plans with respect to land use and development.

Policy R-1

It shall be the policy of Council to establish the General Resource Designation. This designation will cover the entire County of Inverness and will specifically address wind turbine development. All other development shall be allowed as of right, subject to the existing designations within the Secondary Planning Strategies.

Policy R-2

It shall be the policy of Council to define the Chéticamp, Inverness, Port Hood, Port Hastings and Whycomagh Municipal Planning Strategies as Secondary Planning Strategies within the County.

Policy R-3

It shall be the policy of Council to define within the Land Use By-law “domestic scale turbines” as those with a nameplate capacity of fewer than 100 kilowatts, and “utility scale turbines” as those with a nameplate capacity greater than 100 kilowatts.

2.2 Domestic Scale Turbines

Nova Scotia Power Inc. (NSPI) requires turbines producing more than 100 kW of electricity to be interconnected with a contract signed by an independent power producer and treated as a “large scale wind turbine.” Turbines smaller than this can supply power “behind the meter”, and for the purposes of this Strategy they will be considered “domestic scale turbines”.

Domestic scale turbines are becoming increasingly popular and are used to power or help power homes, farms and small businesses. Residents whose turbines are connected to the grid can use grid energy storage, where domestically produced electricity displaces purchased electricity when available.

Inverness County Municipal Planning Strategy- Wind Turbine Development

Domestic wind energy generation can result in substantial energy cost savings for residents and businesses. Council recognizes their benefits and is supportive of their use, and intends to establish the General Resource (GR-1) Zone, which will permit domestic-scale turbines through development permit. Initially this zone shall cover a majority of the County.

Council feels that domestic scale turbines should be set back from all property lines, in order to wholly contain the turbine on the lot if it were to fall. These setbacks would also help to protect neighbouring properties, particularly in densely populated areas, from the noise, visual impact or other environmental concerns that domestic scale turbines could produce. As Council feels that domestic scale turbines are not suitable for higher density residential areas, minimum lot sizes will also be imposed.

Council also recognizes that some domestic turbines are large enough to provide electricity to more than one household, and that residents may want to share the power generated by a turbine. As property line setbacks are used to protect neighbouring residences from potential impacts of domestic-scale turbines, if neighbours wish to waive these setbacks in order to share the benefits of wind turbines, or for any other reason, Council feels it is reasonable that in site-specific circumstances the setbacks may be eliminated.

Domestic scale turbines come in a variety of sizes, some producing as little as 50 watts of electricity to charge a battery, though most produce in the range of 1-10 kW of electricity. These turbines can be installed as stand-alone structures, or are quite often attached to the side wall or roof of a building. The Canadian Wind Energy Association defines the smallest turbines, those producing less than 1 kW (1000 watts) as “mini wind turbines.” These mini turbines, which are available at some retail outlets in Canada, have little impact on surrounding properties. As such, Council believes they should be defined separately and do not need to be regulated as strictly. Council feels there is no need for a minimum lot size to be imposed for mini wind turbine construction and that the property line setbacks in place for other domestic scale turbines should suffice for these mini turbines.

2.3 Utility Scale Wind Turbines

Utility scale wind turbines shall be defined as those producing more than 100 kW of electricity, and Council expects most utility scale wind turbines to be much bigger than that, often in the range of 750 kW to 2 MW, since these turbines are intended to produce power to sell to NSPI. Given the size of the structures, as well as the significant infrastructure and capital required for construction and servicing, such developments often occur as wind farms.

Small increases in wind velocity can have a great impact on energy produced; thus Council recognizes that the location and design of turbines are very important. Turbine development locations will be regulated using setbacks, creating minimum separation distances that are intended to address concerns of noise, visual impact, environmental protection and other off-site impacts. While there is some disagreement between industrial, residential and environmental interests as to appropriate setbacks, Council believes this approach will provide for wind turbine development in the future and also provide a degree of protection to homeowners to continue the use of their residential property. Additionally, in order to protect water bodies and prevent erosion, turbines should be adequately set back from watercourses. Council believes that a greater setback from coastlines should be implemented given concerns relating to increased coastal erosion and storm surges due to projected sea level rises. Likewise, due to concerns about blade throw or ice throw, turbines should also be adequately set back from public roads.

In keeping with Council’s original intent to regulate only wind turbine development, the setback requirements will not apply to future residential growth locating closely or relatively closely to existing

Inverness County Municipal Planning Strategy- Wind Turbine Development

turbines. Council's position is that homeowners who do so will be fully aware of the distance their residence will be to a turbine and will have accepted any adverse effects, if any, that the turbine may have on them. The same is true of future purchasers of these residences. Existing wind turbine development that does not meet the setback requirements will be allowed to continue as non-conforming structures, but an expansion resulting in further reduction of setbacks will not be permitted.

Policy R-4

It shall be the policy of Council to establish, within the General Resource Designation, the General Resource (GR-1) Zone in the Land Use By-law. It shall be the policy of Council to permit within the General Resource Zone both domestic-scale and utility-scale wind turbines as of right and by way of development permit. All other uses, with the exception of wind turbines, shall also be permitted as of right, and while they will not be subject to a development permit under this plan, some developments falling within the jurisdiction of a Secondary Planning Strategy may require a development permit as per that Secondary Planning Strategy.

Policy R-5

Council shall establish minimum lot size and setback requirements from all property lines for wind turbines in the General Resource (GR-1). Notwithstanding this minimum setback requirement, where a domestic scale wind turbine development is proposed on a lot where the immediately adjacent property is subject to a long term lease for the domestic wind turbine use, the setback requirement for the turbine from a property line shall not apply.

Policy R-6

Council shall allow consenting landowners to waive setback requirements for domestic scale turbines.

Policy R-7

Council shall define in the Land Use By-law "mini wind turbines" as domestic scale turbines with a nameplate capacity of less than 1 kilowatt (1000 watts). The intention of Council is that the minimum lot size requirements in the Land Use By-law be waived for "mini wind turbines".

Policy R-8

To protect from erosion, Council shall establish a setback for utility scale turbines from all watercourses, with a greater setback specified for coastal areas.

Policy R-9

Council shall establish minimum setbacks from all public roads for utility scale turbines.

2.4 Parks and Protected Areas

Within Inverness County there are is a National Park, as well as many Provincial Wilderness Areas, Nature Reserves and a Heritage River. In keeping with the spirit of these protective designations, a Utility-Scale Turbine Exclusion Zone will be created, in order to provide these federally-designed and provincially-designated areas with additional protection from development pressures. Council may also elect to zone additional areas into the Utility-Scale Turbine Exclusion zone in order to protect views considered particularly important to a community for cultural reasons. Domestic-scale turbines will still be permitted as-of-right in these areas, as they can a means of providing renewable energy to isolated locations, particularly any buildings required to assist in the management of these parks and protected areas.

Inverness County Municipal Planning Strategy- Wind Turbine Development

Policy R-10

It shall be the policy of Council to establish, within the General Resource Designation, the Utility-Scale Turbine Exclusion (UTE-1) Zone in the Land Use By-law. This zone shall be applied to lands that are federally-designated or provincially-designated as a park or protected area. Council may also elect to zone lands that provide or are a part of views that are significant culturally to a community. The policy of Council shall be to permit within the Utility-Scale Turbine Exclusion Zone only domestic-scale wind turbines as of right and subject to a development permit. All other uses, with the exception of wind turbines, shall also be permitted as of right, and while they will not be subject to a development permit under this plan, some developments falling within the jurisdiction of a Secondary Planning Strategy and may require a development permit as per that Secondary Planning Strategy.

2.5 Expansion of Wind Development

Wind farms will be permitted within the County, provided that all of the turbines meet the setback requirements. There may be instances where a number of contiguous properties are leased for wind turbine development. Although the properties are leased, the property lines remain in place. If an adjacent property owner has also leased their land for wind turbine development, the concern of a wind turbine falling onto the leased land should not apply. Therefore the setback requirement from a property line, where applicable, will be waived where the adjacent property is leased on a long term basis for wind turbine development.

As previously indicated, Council will not regulate any development with this document other than wind turbine development. Therefore, the setback requirements will not apply to new residential development being located close to any utility scale wind turbine development. If such residential development does occur, Council is of the opinion that it should not prevent an expansion of a wind turbine development that has been established in conformity with this Strategy. However, the expansion should not be located any closer to the residential development that has been built within the setback.

Policy R-11

Where a residence is constructed within the setback distance of utility scale wind turbine development erected after the effective date of this Strategy, the wind turbine development may expand provided the expansion is not located closer to the residence than the initial wind turbine development.

2.6 Documentation Requirements for All Turbines

Within this plan, wind turbines are grouped into two sizes: domestic and utility. Each of these sizes has a specific set of requirements in the Land Use By-law. All new wind turbines will be subject to certain site plan requirements assuring a basic level of safety and aesthetic standards, and property owners or developers shall be required to submit documentation to that effect. These standards will have to be met in order for a development permit to be issued. Council also recognizes that noise from turbines can have an impact on residences. The World Health Organization recommends 30dB as an acceptable noise standard in the interior of a house, which would roughly equate to 40dB outside the home.

Inverness County Municipal Planning Strategy- Wind Turbine Development

Policy R-12

Council shall establish within the Land Use By-law site plan and documentation requirements to assure safety, environmental and aesthetic standards are met in order to receive a development permit.

Policy R-13

Council shall establish within the Land Use By-law noise standards for all turbines ensuring minimal disturbance to surrounding residents.

2.7 Removal of Turbine

When the time comes that a utility scale wind turbine is no longer in operation, the owner shall remove the turbine and all associated equipment from the site within a reasonable period of time. The owner shall also endeavour to restore the site to a reasonable natural condition. Council would like to be informed of the decision to remove the wind turbine as early as possible.

Policy R-13

Council shall establish, within the Land Use By-law, a time by which inactive wind turbines and all supporting structures must be removed from the site and the site be restored to a natural condition. Council shall be made aware of decisions to remove any wind turbines and determine a time by which developers must notify Council of such.

3. IMPLEMENTATION

3.1 General

The Municipal Planning Strategy for the County of Inverness is the policy document providing the framework by which wind turbine development throughout the entire County is encouraged, controlled and coordinated. The policies of the Strategy will be implemented through a variety of means, but generally through the powers of Council as provided by the *Municipal Government Act* and other statutes that may apply.

Policy I-1

It is the intention of Council that all sections of this document and Generalized Future Land Use Map shall constitute the Municipal Planning Strategy for the Municipality of the County of Inverness.

Policy I-2

In addition to employing specific implementation measures, it shall be the policy of Council to maintain a program of ongoing planning through the Inverness County Planning Advisory Committee and Inverness County Council. Such a program shall include aspects of public information and participation, further study respecting such matters as the drafting or revision of Municipal By-laws that deal with wind energy or any other issues that Council may suggest.

Policy I-3

In order that development control decisions may be based on expert advice beyond that which the Planning Advisory Committee is able to supply, applications for amendment of the Land Use By-law shall be directed to the Eastern District Planning Commission and provincial and federal government agencies for their information and comment, as may be required.

3.3 Amending the Municipal Planning Strategy

Policy I-4

It shall be the policy of Council to require amendments to the policies and maps of the Municipal Planning Strategy under the following circumstances:

- a) where any policy intent is to be changed;
- b) where detailed areas or functional strategies are desired to be incorporated into this Strategy; or,
- c) where the Strategy is in conflict with applicable provincial land use policies or regulations, in accordance with the *Municipal Government Act*.

Policy I-5

Strategy amendments shall require the approval of the Minister of Service Nova Scotia and Municipal Relations and shall be carried out in accordance with the provisions of the *Municipal Government Act*.

3.4 Amending the Land Use By-law

The Land Use By-law is the instrument by which all the policies in this Municipal Planning Strategy dealing with wind turbine development are implemented. The Land Use By-law establishes certain land use zones, identifies their location on a Zoning Map, and indicates the uses permitted and the development standards required.

Policy I-6

In considering amendments to the Land Use By-law, in addition to all other criteria as set out in various policies of this Strategy, it shall be the policy of Council to have consideration of the following:

- a) That the proposal is in conformance with the intents of this Strategy and with the requirements of all other Municipal By-law and regulations;
- b) That the proposal is not premature or inappropriate by reason of the following:
 - i. the financial capability of the Municipality to absorb any costs relating to the proposal;
 - ii. the intersection of any access road(s) with any public road and meeting the design and construction specifications of the authority having jurisdiction over public roads;
 - iii. the potential for the contamination of abutting watercourses or private wells or the creation of erosion or sedimentation as a result of the development as determined by a qualified person from the appropriate government department; and,
 - iv. the potential impact on protected wetlands or other sensitive habitat and on endangered species in the area of the proposed site;

Policy I-7

In considering amendments to the Land Use By-law, in light of the above policy, it shall be the intention of Council to require the following information to assist in the assessment of the proposal:

- a) A report from the Eastern District Planning Commission.

Policy I-8

In addition to the advertisement for public hearing requirements in the Municipal Government Act, it shall be the policy of Council to require the Municipality to notify all adjacent land owners of applications to amend the Land Use By-law.

3.5 Plan Review

Council recognizes that wind turbines are a relatively new technology, and that knowledge and experience in the field grow with practice. In accordance with the *Municipal Government Act*, this Strategy may be reviewed when either the Minister of Service Nova Scotia and Municipal Relations or Council deem it necessary.

Policy I-9


Council shall review this Municipal Planning Strategy and Land Use By-law within five years of its adoption. At that time, Council shall examine the number of wind turbines sited, the impact on the landscape and on tourism and any other issues that Council deems necessary.

Municipality of Inverness County

Wind Turbine Development

Generalized Future Land Use

Designation

 General Resource

